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# **Institutional Work and the Notion of Test**

## Kafui DANSOU

## Ann LANGLEY

#### HEC Montréal kafui.dansou@hec.ca

HEC Montréal ann.langley@hec.ca

## Abstract

Institutional work concerns the way in which the activities of actors contribute to the evolution of institutions, whether through their creation, disruption or maintenance. In this paper, we argue that the notion of "test", as developed by conventionalist theory, provides an innovative lens through which to examine the nature of institutional work and the evolution of institutions. Conventionalist theory posits that constitutive value frameworks guide individuals' behaviors and provide the legitimating systems for their actions. It pays particular attention to moments of questioning of these value frameworks, and how they may affect existing legitimate practices and principles. Such moments of test provide a remarkable opportunity for understanding institutional work as they allow a close examination of three key dimensions associated with actors' questioning or reproduction of constitutive value frameworks: agency, relationality and temporality. We suggest that an analytical focus on moments of test can foster more systematic attention to these dimensions, and productively contribute to ongoing research on how and why institutions may be disrupted, maintained, or created in a diversity of situations.

Key words: Institutional Work, Agency, Test, Conventionalist Theory, Pluralism

## INTRODUCTION

In recent years, the study of institutional stability and change has gradually expanded from investigating the macrodynamics of fields to a concern with the varied actions that can affect institutions. The latter is the central focus of the "institutional work" perspective, which examines the "purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions" (Lawrence & Suddaby, 2006: 215, emphasis original). The purpose of this paper is to contribute to the conversation on institutional work by drawing on the notion of test from conventionalist theory (Boltanski & Thévenot, 2006). Research to date has offered an increasingly rich and contrasted view of the practices involved in institutional reproduction and change. However, as Lawrence, Suddaby and Leca (2011) recently noted, our understanding of the relation between agency and institutions is still incomplete. Questions remain regarding how and why institutional work occurs, and the relationship between human agency (micro-actions) and institutions (macro-influences). Our understanding of both the impact of more or less reflexive actions on institutional evolution and the ways in which actors' actions and reactions combine to affect institutional arrangements remains sketchy. In addition, as Zietsma and Lawrence (2010) suggest, relatively little is known about how different stages in the evolution of institutions start up and follow on.

We propose that a more systematic investigation of these questions may be achieved by examining the moments of questioning of institutional arrangements that punctuate institutional lifecycles. In these moments, actors seek to confirm or choose to confront the way in which institutional rules, norms or accepted beliefs are instantiated in particular situations. These are instances where the link between micro-level actions and macro-level principles are assessed in the empirical realm, and thus when institutional solidity and plasticity are assessed, and their confirmation or alteration is played out. We argue that the notion of test conceptualized by conventionalist theory (Boltanski & Thévenot [1991], 2006; see also Boltanski & Thévenot, 2000; Boltanski & Chiapello, 2005) can valuably add to ongoing systematic research on institutional work. Tests are moments in which challenges to unfolding action may occur, and through which actors seek to confirm or readjust the conditions and principles shaping ongoing activities (Boltanski & Thévenot, 2006; see also Blokker & Brighenti, 2011; Patriotta, Gond, & Schultz, 2011). These are moments of malaise in which the principles underpinning actors' judgments and beliefs about what is appropriate for the situation at hand are made most visible through argumentative moves and reliance on material proofs.

Conventionalist theory proposes that human behavior is both enabled and constrained by socially and historically constructed legitimating systems labelled "Orders of Worth" (Boltanski & Thévenot, 2006 [1991]; Jagd, 2007). This resonates with the view of institutional theorists, who consider that human action is embedded in institutional structures whose organizing principles (or "institutional logics") guide action while also being shaped by it (e.g., Friedland & Alford, 1991; Lawrence, et al., 2011; Thornton, 2002). Indeed, there are important similarities between conventionalist theory's "Orders of Worth" and institutional theory's "logics" – defined by Friedland and Alford

(1991: 248) as "a set of material practices and symbolic constructions which constitutes its organizing principles and which is available to organizations and individuals to elaborate". Orders of worth are multiple and incommensurable just as institutional logics are multiple and distinct. However, there are also differences in the way both these organizing principles have been articulated, as has been noted in recent studies (Cloutier & Langley, 2013; McInerney, 2008; Patriotta, et al., 2011). Notably, conventionalist theory has its origin in the analysis of social action and coordinating mechanisms. We are here particularly interested in conventionalist theory's notion of test, which affords a finer-grained examination of "critical moments" (Boltanski & Thévenot, 1999) in social life, and the micro-processes underlying the possible persistence or change of socially constructed legitimating systems (Boltanski & Thévenot, 2006; Jagd, 2007; Thévenot, 2001). We find this conceptual grounding of the analysis – which focuses on the micro level without losing sight of macro-influences — particularly promising for the study of institutional work.

The paper begins with a brief overview of institutional work literature. It highlights the ways in which research undertaken so far has addressed the relationship between the actions of individual and collective actors and institutional evolution, and identifies areas that require further development. In the following section, we present the notion of test as conceptualized by conventionalist theory. We show how it may contribute to illuminating these under-explored areas and, in particular, how it may offer a richer account of agency, relationality and temporality in institutional evolution. We further illustrate the potential offered by the notion of test by discussing exemplary cases from conventionalist theory-inspired research. We conclude by inviting more empirical research in the institutional work tradition, drawing on conventionalist theory's notion of test.

# INSTITUTIONAL WORK: ACTORS' ACTIONS AND INSTITUTIONAL EVOLUTION

Lawrence and Suddaby (2006) locate the theoretical foundations of the notion of "institutional work" at the intersection of seminal studies that identify the importance of agency in understanding institutional processes (e.g., DiMaggio, 1988; Oliver, 1991; 1992) and research in the tradition of the sociology of practice (e.g., Bourdieu, 1977; Giddens, 1984) which suggests that institutions are constituted through the actions of individual and collective actors. From this perspective, the relation between institutions and agency may be manifested in various ways, since actors undertake actions—whether conservative or creative, deliberate or mundane—which can affect institutional practices, boundaries, organizational forms, institutional rules or meanings. Lawrence and Suddaby (2006) identify three broad categories of institutional work: "creating," "maintaining," and "disrupting" institutions. We now review each of these categories briefly and identify particular gaps where we believe conventionalist theory, and specifically the notion of test, might offer potential insight.

### **Creating institutions**

A large number of studies in the institutional work tradition has sought to

describe, explain and theorize about the influence of actors' actions and discursive moves on the creation of institutions (Lawrence & Suddaby, 2006; Lawrence, Suddaby, & Leca, 2009). In general, research that deals with creative institutional work most often depicts instigating actors with high levels of reflexivity who manage, through strategic acts and even manipulative moves, to further their idiosyncratic interests or bridge other stakeholders' interests. For example, Maguire, Hardy and Lawrence (2004) investigate the introduction of new practices for consultation and information exchange in the HIV/AIDS treatment advocacy field, by highlighting the work of two individuals with instrumental motives (institutional entrepreneurs) in creating and promoting the widespread adoption of these practices at the field level. Weber, Heinze and DeSoucey's (2008) study of the creation of a new market segment reveals a not dissimilar skillful mobilization of strategies by a coalition of activists to foster new practices. Intentional strategic actions by individuals or collectives also seem prominent in accounts of institutional work involved in legitimating previously marginal practices within a field, such as health care (e.g., Reay, Golden-Biddle, & Germann, 2006), or in transforming extant practices by promoting new meanings and rules, as in Munir and Phillips's (2005) study of the work of Kodak in legitimating the roll-film camera and in Garud et al.'s (2002) research on standard-setting in the information technology field.

Thus, in most studies, protagonists' actions are presented as more deliberate and strategic than not. Yet, Lawrence, Hardy and Phillips's (2002) research on inter-organizational collaborations suggests that the emergence of new practices may not be planned occurrences but rather "second-order" effects. Similarly, Delbridge and Edwards (2008) show that field-level innovation in the superyacht industry emerged rather fortuitously from the pragmatic engagement of an interior designer with industry players. It is thus important for a better understanding of institutional work not to overlook these more nuanced cases, and to study agency implicated in the construction of new practices and meanings in its varied forms, including those where intentionality appears to be less pronounced.

Another important issue—that has so far received limited attention in research on creative institutional work-is how actors' actions and others' reactions to new introduced activities combine to affect institutional creation, and influence resulting institutional arrangements. Institutional studies have traced the actions of particular individuals or groups in relation to the institutions being created (e.g., Maguire, et al., 2004; Weber, et al., 2008), and the moves and countermoves of proponents in an attempt to appease, bypass or defeat opposition to the newly created practices (e.g., Garud, et al., 2002; Suddaby & Greenwood, 2005). However, the varying forms of actions and reactions, and in particular the context and ways in which they combine to affect institutional creation trajectories, has received scant attention. The few studies that have examined the complex interweaving of actions and reactions suggest that processes of institutional formation are not just led by powerful instigators but are also usually shaped by more or less active responses, and even pragmatic actions developed in those particular contexts (Lounsbury & Crumley, 2007; Smets, Morris, & Greenwood, 2012; Zietsma & McKnight, 2009). We suggest that an analytical approach that would allow a more systematic examination of how actors' actions play out and combine in support of institutional change or stability-which may involve promotion, negotiation, accommodation, and refinement among multiple actors—would help to improve our understanding of institutional work. As we will show later, we think that the notion of test from conventionalist theory may be of particular utility here, as well as for addressing more fully the varied forms of agency brought to bear in situated interactions.

#### Maintaining institutions

Compared with research on institutional creation, the investigation of actors' efforts associated with the persistence of existing institutional arrangements has received relatively limited attention (Lawrence & Suddaby, 2006; Scott, 2008: Suddaby, 2010). Generally, this line of research has been concerned with work involved in "supporting, repairing or recreating the social mechanisms that ensure compliance" (Lawrence & Suddaby, 2006: 230). For example, research on the development of regulative mechanisms such as standards (e.g., Garud, et al., 2002; Slager, Gond, & Moon, 2012) has described maintenance work as operating alongside creation work, as standards promoters strive to monitor the proper application of institutional prescriptions. Likewise, accounts of socialization activities (e.g., Dacin, Munir, & Tracev, 2010; Zilber, 2002) have mainly addressed active and deliberate strategies to foster institutional reproduction. More recently, practice-oriented research on institutional maintenance has highlighted a different kind of work that consists in actors' pragmatic problem-solving behaviors as they seek to accomplish their ongoing activities, and may take the form of passive maintenance (Sminia, 2011) or conscious accommodation of some degree of variation in practice performance (Lok & de Rond, 2012). However, forms of maintenance work such as these generally remain under-explored.

Again, we think the notion of test could be of particular interest in better conceptualizing and understanding the various forms of agency involved in institutional maintenance. Maintenance work appears to range from the more muscular reaffirmation of threatened institutional rules, norms and values through control work aimed at ensuring the proper use of accepted templates and procedures, to even more subtle forms of maintenance work where some variation is tolerated. All these are instances where different combinations of actions and reactions are at play, the systematic examination of which, we argue, stands to provide additional insights on maintenance work, and how and why it occurs.

#### **Disrupting institutions**

Disruption work is defined by Lawrence and Suddaby (2006) as actions aiming to attack or undermine the mechanisms that stabilize institutions. To our knowledge, empirical research on disruption work as the primary phenomenon being studied has been rare. Exceptions include Maguire and Hardy's (2009) study of the actions of individuals in problematizing the use of DDT and the particular meanings it promoted, which effectively undermined the regulative, normative and cognitive pillars sustaining this widespread practice. The bulk of research on the work of actors in disrupting institutional arrangements has, however, tended to address disruption in conjunction with other types of work. For instance, Jarzabkowski, Matthiesen and Van de Ven (2009) examine disrupting work which took place as a new institutional logic was introduced in a utility company, leading to simultaneous disruption and maintenance work. Concurrent disruptive and creative work is also illustrated in Leblebici, Salancik, Copay and King's (1991) research on the creation of mass-broadcasting media as field players sought to question and challenge the values underlying the financing of radio programs.

Overall, disruption work presented in the extant literature equally appears to concern mainly disruptive actions that are highly intentional and even strategic. Yet, Oliver's (1992: 564) analysis of deinstitutionalization, defined as "the process by which the legitimacy of an established or institutionalized organizational practice erodes or discontinues", leaves open the possibility that work that would lead to deinstitutionalization might include not only the intentional and highly deliberate assault on institutional foundations, but also more gradual forms of agency that could lead to the dissipation of an institutional practice. Again, we think that a focus on moments of test as occasions when actors may engage in actions and reactions that involve either active challenges to existing organizing principles or related procedures, or more nuanced forms of agency such as choosing not to defend them, may provide a route to better understanding patterns of institutional disruption.

#### Patterns of institutional evolution

The activities of creating, maintaining and disrupting institutions are often treated as three separate forms of institutional work. A broader perspective would consider them as complementary contributors to an overall pattern of institutional evolution. However, few studies have examined the lifecycle of institutions and the types of institutional work that have shaped the emergence, persistence and possible dissolution of institutions over time. Rare exceptions include Farjoun's (2002) study of the history of pricing arrangements in the online database industry and Zietsma and Lawrence's (2010) study of the evolution of the coastal forestry industry in British Columbia. By studying the continuum of institutional lifecycle stages, the authors of both studies reveal the arbitrariness of the path of institutional evolution. Thus, rather than a determinate linear pattern, the authors highlight moments that appear crucial in the transition from one stage to the other, when actors expose contradictions (Seo & Creed, 2002) and express dissatisfaction about existing practices. At such times, it seems that a series of critiques and defensive responses ensued, accompanied by experimental work and collaborative or competitive actions, leading to institutional change, persistence or ongoing institutional conflict.

Indeed, these moments appear to be an important locus for institutional work. Although not explicitly theorized as such by Farjoun (2002) and Zietsma and Lawrence (2010), such moments constituted key focal points in their analysis of the evolution of institutions and of actors' influence on such evolution. We suggest that the attention granted to these moments may have contributed to the presentation by both studies of more nuanced accounts of actors' pragmatic engagement with institutions and its effects on the path of institutional evolution. We argue, however, that a more systematic mobilization of such moments, that we associate with the notion of test, would allow a richer consideration of institutional plasticity and evolution.

In summary, the extant literature has contributed greatly to our understanding of institutional work, and continues to grow and stimulate further thinking and exploration of the multiple ways in which actors may influence the institutions that shape their own and others' behavior. Recent work that has taken on the task of investigating how more pragmatic, mundane and even emergent forms of agency have affected institutions is, we believe, a welcome addition to the generally more frequent accounts of deliberate, strategic and calculative forms. We argue that more systematic investigation of the processes of creation, maintenance and disruption of institutions would benefit from a focussed examination of the specific moments in which institutional malaise, contest or crisis, are played out. Suddaby (2010: 17) and others suggest that "institutions (...) tend to only reveal their inner workings during times of disruption or stress, when the social order is inverted (...), or the institutional fabric is torn and we can observe, however temporarily, the inner mechanisms of institutions".

Moments where the inner workings of institutions are revealed through the actions of actors and where they may—through their varied enactment of institutional arrangements—affect institutions are, in our view, an important locus of institutional work. These moments, we argue, could be valuably identified and approached by drawing on the notion of test, a core concept of conventionalist theory. More specifically, we suggest that the notion of test contributes by offering: (1) an approach to understanding varied forms of intentionality (agency); (2) a conception of institutional work as relational, i.e., as involving actions and reactions of people and material objects (relationality); (3) an analytical lens that focuses attention on critical moments of institutional evolution and their inter-relationships over time (temporality). We present the notion of test in the following section, and then discuss in more detail how it may help advance institutional work research according to these three main themes.

# THE TEST AS AN ANALYTICAL LENS FOR EXAMINING INSTITUTIONAL WORK

### The notion of test

The notion of test plays a central role in conventionalist theory, and is comprehensively defined in the work of Boltanski and Thévenot, in particular in their 2006 ([1991]) book On Justification. Table 1 offers a summary of the key conceptual elements associated with this notion. Broadly speaking, tests refer to familiar occurrences when actors' enactment of legitimate organizing principles is made more visible. These are moments when actors' performance of widely accepted established rules, norms and belief systems are questioned. In moments of test, individual and collective actors' engagement with their context is the object of judgment in terms of correspondence with legitimate organizing principles (Blokker & Brighenti, 2011; Blondeau & Sevin, 2004; Boltanski & Thévenot, 2006). For instance, when staff promotion is discussed in a firm at the end of a fiscal year, the Executive Director might launch a performance appraisal in order to determine who will be promoted. This could be seen to constitute a test rooted in what Boltanski and Thévenot label the "industrial worth", as staff members' work performances would be judged against explicitly defined measures of productivity. Alternatively, this moment may also constitute a test if it is the first time that staff promotion is being considered in the firm, and the Executive Director and staff members wrestle with the very question of which principles and procedures to use in order to decide on who is to be promoted. Both these moments "put to a test" the organizing principles that ought to guide staff promotion in this firm: in the first instance, "testing" would concern the application (or validity of a particular application) of accepted procedures, while in the second instance, it would be about the very organizing principles underlying promotion decisions.

In abstract terms, conventionalist theory conceives of tests as occasions of questioning of value frameworks, as actors seek to reduce uncertainty by determining the principles that ought to apply in a given situation. This theoretical framework posits that competing constitutive value frameworks guide individuals' behaviors, constraining but also enabling agency. Specifically, Boltanski and Thévenot (2006) propose that six such frameworks exist: the Domestic, Inspired, Fame, Industrial, Market, and Civic orders of worth. Thev are labeled 'orders of worth' as each constitutes a systematic construction that rests on a commonly valued higher principle, allowing the qualification (or evaluation) of actions, people, and material objects and arrangements as legitimate (or not) in the setting where they are deployed. Each thus points to the legitimate forms of instantiation of a higher ordering principle. In broad terms, the "domestic" order of worth values the principles of hierarchy, loyalty and tradition, while the "inspired" order values the spontaneous creativity of the artist. The "fame" order of worth values public recognition and prestige, while the "industrial" worth is driven by the search for efficiency. The "market" order of worth values competition and success through commercial exchange, while the "civic" worth implies pursuit of civic duty, collective good and community solidarity. Since the original formulation by Boltanski and Thévenot (2006), Boltanski and Chiapello (2005) have proposed a seventh order of worth named "connectionist", based on the value of networking and project-based organizing, while others have suggested a "green" order of worth that focuses on ecological values (Lafaye & Thévenot, 1993). In this paper, it is not our intention to insist further on the number of orders of worth that might be identified, but rather on the way in which these may be brought to bear in practical situations.

Indeed, since multiple orders of worth may coexist in the same social space and provide the legitimating systems for actors' actions, to reach agreement in situations of coordinated social action, actors engage in tests (Boltanski & Thévenot, 2000, 2006). Through these tests, they seek to bring out agreement on the worth of actors involved and the justness of actions performed. Tests do not determine whether an agreement will be reached or not; indeed, their outcomes are uncertain (Boltanski & Thévenot, 1999, 2006). They do, however, constitute critical moments through which one may gain a better understanding of human agency in relation to organizing principles.

We argue that the notion of test elaborated by Boltanski and Thévenot (2006) offers important theoretical insights into what is involved in the *doing* of institutional work. Indeed, a test is at the heart of the reflexive process leading to the relativization of observed deviations, the reaffirmation of existing organizing principles, the evocation and integration of new principles into particular situations, or even the framing of new ones. When an actor engages with her context, she may expect certain rules, norms or beliefs to guide behaviors, given the particular situation faced. If she perceives inconsistencies in the performances of other actors, distinction among people or material arrangements, she may opt to gloss over observed discrepancies so as to "get on" with what needs to be done, or question the situation in an effort to reach clarity on "what matters". A test thus represents a moment when conditions are ripe for reflexive behaviors. In these moments, actors may put forth a critique

(denounce inconsistencies) or give justifications (enunciate the principles legitimating particular behaviors or arrangements). Taken together, their actions may contribute to challenging the social arrangements invoked in the situation, reproducing them, or working towards new arrangements.

Table 1. The notion of test as defined by conventionalist theory

	CONCEPTUAL ELEMENTS	EXAMPLES
Definitions	A <b>test</b> is a moment of questioning of value frameworks or their forms of instantiation in which actors seek to confirm or determine the principles, or "orders of worth", that ought to apply in a given situation.	<ul> <li>Performance appraisal; Public hearings; Any moment where value frameworks are drawn on in interaction with others to question or assess the appropriateness of action.</li> </ul>
	An <b>order of worth</b> is a constitutive value framework that guides individuals' behaviors. An order of worth is defined by a set of internally consistent components (a higher order principle; legitimate forms of instantiation: e.g., appropriate forms of evidence, relevant objects and subjects).	- Boltanski and Thévenot (2006) identified six "orders of worth": domestic, inspired, fame, industrial, market and civic, but others have also been suggested. The "industrial" order of worth, for instance, values efficiency while the "civic" order of worth values community solidarity.
Forms of test	<ol> <li>Test of "state of worth": Questioning of the degree to which the principles appropriate to a situation are being correctly applied.</li> </ol>	- Questioning whether the correct conditions are in place to ensure fair performance appraisal as an accepted criterion for promotion.
	2) Test of "order of worth" (second order test): Questioning of the appropriateness of principles being applied in a particular situation.	<ul> <li>Questioning whether performance appraisal is the appropriate criterion for determining promotion (e.g., rather than seniority).</li> </ul>
Elements brought to bear in tests	<ul> <li>Justifications and critiques: Arguments supporting action on the basis of value frameworks, or critiquing actions as violating appropriate frameworks.</li> </ul>	<ul> <li>Arguments justifying a promotion on the basis of performance, or denouncing it by suggesting it should have been based on seniority.</li> </ul>
	- <b>Objects</b> : Material proofs that support justifications and that are associated with different worlds or orders of worth.	- Measurements, charts, tools (related to the industrial worth); Union contracts (related to civic worth).
	- <b>Subjects</b> : Embodied qualifications that grant people legitimate voice to say how particular organizing principles should be instantiated. Different qualifications may be valued in relation to different orders of worth.	- Professional qualifications that provide evidence of expertise (related to the industrial worth); Elected roles (related to the civic worth).

## Two forms of tests

As noted earlier, conventionalist theory's conception of tests suggests that, as actors confront the unfolding dynamics of situations, testing may occur which questions the particular application of generally accepted procedures (or other forms of instantiation of a given organizing principle) in a given situation; or at a deeper level, the very organizing principle which actors seem to draw upon in that situation (Boltanski & Thévenot, 2006; Dodier, 1993; Thévenot, 2000). Hence, testing can be of two different natures: (a) it can rest on a questioning of the proper instantiation of macro-level organizing principles in the empirical realm (micro-level actions); or (b) it can challenge the macro-level organizing principles in practice, by denouncing the principles that transpire through actors' actions and seeking to promote different principles. These have been described in *On Justification* (Boltanski &Thévenot, 2006) as tests that concern

"the way worths have been distributed in the situation at hand" (Boltanski & Thévenot, 2006: 133), also referred to as "state of worth" in the case of the first type of tests; and testing which is about the "order of worth" or "the principle that is to govern the way the test is carried out and with the world in which the test has to be set up if it is to be conclusive" (ibid: 223) for the second type. In that sense, the latter are *second order* tests forming part of what Boltanski (2011: 67) labeled the "metapragmatic register", where reflexivity is heightened and participants shift "from the task to be performed to the question of how it is possible to characterize what is happening."

If we go back to the example of the firm contemplating the use of performance appraisal at the end of the fiscal year to grant deserving staff a promotion (see Table 1), a test concerning the "state of worth" (the first type of test) could arise if staff members object to the fact that the evaluation is to be carried out by an Executive Director who has only recently joined the firm and, as such, is not well positioned to judge performance over the whole fiscal year. They do not question the use of technical performance procedures to grant promotion, only the importance given to the new Executive Director in this process. This test situation suggests an overall acceptance of principles of technical efficiency (associated with the "industrial" order of worth) to guide staff promotion decisions, but it also reveals a malaise over the proper instantiation of these principles, which actors would normally seek to address. On the other hand, a second order test might arise if a group (such as a union) were to argue that performance appraisal is not adequate for the firm, and suggest that seniority-rather than technical performance-ought to be the criterion for promotion decisions. In this test situation, a broader disagreement over organizing principles is discernible (principles of the industrial versus domestic worths), which may develop into argumentative moves about which organizing principle ought to apply.

#### The test and the material realm

The notion of test as articulated by Boltanski and Thévenot (2006) brings forth another important insight into the confrontation of value frameworks and how they may unfold in practice. It suggests that tests are not just about rhetorical or discursive moves – or what institutionalists have called "theorization" (Strang & Meyer, 1993; Suddaby & Greenwood, 2005); importantly, they also implicate the material world, as the arrangements involved in the situation are drawn upon as proofs, to support critiques and justifications (Boltanski & Thévenot, 2000; Thévenot, 2009). In fact, in the course of a test, perceived inconsistencies may encourage actors to voice a critique—starting with a questioning of the presence or absence of objects—which throws doubt on the nature of the situation, in an attempt to distinguish legitimate objects from contingent (hence irrelevant) circumstances and work towards a basis of understanding of what matters and what does not. Objects are important signifiers of the organizing principles being enacted.

The import of artefacts or "objects", as Boltanski and Thévenot (2006) name them, is manifest in the following example: in a situation where an organization is about to undergo an external audit, it would seem reasonable that the Director discuss with the auditor the terms of the audit and the criteria that will be used. During their meeting, the Director may point to a copy of the "terms of reference" of the audit lying on her desk, and the auditor could refer to her firm's adherence to the International Standards on Auditing to ground assertion about their professionalism. But, if the Director were to offer the auditor a personal gift, the situation would most likely become awkward and leave a doubt as to the nature of the relationship the Director wishes to institute. A gift is conceivably more germane to familiar relations (domestic worth) where it serves to sustain bonding, and is often accompanied by gratitude. It is not commonly associated with an external audit situation where professionalism, impartiality and auditor independence (industrial worth) are usually expected. The presence of a gift could thus be questioned and this may trigger a series of critiques and justifications.

Objects generally refer to mechanisms which may consist of, but are not necessarily limited to, concrete material things. Just as tools, machines and diplomas could represent objects instantiating a particular order of worth, so too could titles, standards, and unions (Star, 2010). Objects—and arrangements, which are combinations of objects—are socially constructed elements that can serve as support in the coordination of action, as they are commonly identified with one particular order of worth (Boltanski & Thévenot, 2006; see Table 1).

It is also important to note that tests involve not only objects as described here, but also other accepted forms of instantiation of the legitimate organizing principles, and notably what Boltanski and Thévenot (2006) call "subjects". These are embodied qualifications that grant people involved in a situation legitimate voice to say how particular organizing principles should be instantiated; in other words, what matters if a given organizing principle is at work. For example, in the industrial order of worth, a person with professional credentials will be particularly valued, while in the domestic order of worth, seniority and hierarchy will be respected. Boltanski and Thévenot (2006) use the collective term "beings" to refer to the arrangement of people and objects brought to bear in particular situations.

Having introduced the notion of test as defined in conventionalist theory, we now explore three key features of this concept that, we argue, renders it particularly useful to enrich understanding of institutional work. These features are summarized in Table 2.

# THE TEST: CAPTURING AGENCY, RELATIONALITY AND TEMPORALITY IN INSTITUTIONAL WORK

#### The test and varied forms of agency

We suggest that conventionalist theory provides a framework that allows a finer examination of the micro-processes of agency: i.e., the varied forms of actions involved in institutional work at the individual and group levels. In conventionalist theory, individuals are in no way attached to orders of worth; they "can be acquainted with more than one world" (Boltanski & Thévenot, 2006: 219), and have the ability to adjust their behavior in accordance with the situation they face. Their knowledge of the orders of worth and their legitimate forms of instantiation is acquired through experience of many diverse situations, and endows them with the faculty to recognize inconsistencies when these arise. Inconsistencies are addressed or smoothed over in moments of test. These constitute key instances or moments where varied forms of work, in terms of the more or less intentional cast put on actions in relation to reproducing or changing institutional arrangements, can be experienced and/or examined. As activities unfold and tests are deployed, actors' actions may take a variety of forms. As deviations and inconsistencies between micro-level actions and the macro-level organizing principle actors believe ought to guide action in their particular situation are questioned, they may point out these incongruities with an aim to have them corrected, so that a "proper" arrangement of beings and a "proper" enactment of this organizing principle is established in the context they find themselves in. Alternatively, a "second order" test might ensue if actors turn to questioning the very organizing principles that appear to be guiding action; in which case, actors' actions would concern the active promotion of organizing principles that appear appropriate to the situation at hand, or demotion of those that seem inadequate. They may, however, also act in very pragmatic ways by seeking only to get through the activity, thus avoiding the test by leaving deviations and inconsistencies in the background or relativizing their significance (Boltanski & Thévenot, 2006).

These are three forms of actions which can develop in a moment of test. Note that all three rest on actors' reflexivity but denote different degrees of reflexivity (see also Emirbayer & Mische, 1998), and more specifically different levels of intentionality with regard to influencing institutional arrangements. The first form of action, which consists in actors' efforts to reinstate a proper arrangement of beings in a situation deemed ambiguous, reflects a moderately high level of intentionality. Specifically, this form of action, which we label *interpretive agency*, does not primarily seek to affect the extant organizing principle. Rather, it is preoccupied with its instantiation in the specific situations actors find themselves in. Thus, actors reflexively engage with the macro-organizing principle by seeking to establish or reaffirm its legitimate forms of instantiation, in ways that may lead to its reproduction or some contextualization of its application.

The second form of action reflects a much higher degree of intentionality with regard to affecting prevalent organizing principles. We define this form as *strategic agency* since it describes actions that attempt to directly address principles that guide action. This is not to say that they are always planned actions, nor that they do not have unintended consequences. Rather, strategic agency refers to actors' reflexive engagement with organizing principles which seek to challenge and undermine the prevalent organizing principle, or to reassert an organizing principle that is being challenged as inadequate for the situation concerned, or even to introduce a new principle.

The last form of action described is what Boltanski and Thévenot (2006) refer to as situations where actors seek to suspend the test without reaching agreement on whether or not the observed inconsistencies are justified (see also Boltanski & Thévenot, 1999; Jagd, 2007). In so doing, they aim to avoid the continuation of the tension so that action may resume. We label this form of action as *pragmatic agency*, since actors' actions primarily seek the continuation of activities. They engage in operations of accommodations, including relativizing and pardoning (Boltanski & Thévenot, 2006: 35, 339, 355), which consist in treating observed inconsistencies as inconsequential (e.g., "it's nothing", "it's ok") or forgivable given the exigencies of practical action. These are less intentional forms of action in terms of their sought effects on prevalent organizing principles.

#### Table 2. Features of the notion of test as a unit and framework for analysis that can enrich studies of institutional work

#### Contributing feature

#### ATTENTION TO VARIED FORMS OF AGENCY

The test draws attention to three forms of agency of varying degrees of intentionality with regard to organizing principles that may manifest themselves in combination in moments of test.

#### - First form: moderate degree of intentionality;

**Interpretive agency** involves efforts to ensure the proper instantiation of an organizing principle in the specific situations actors find themselves in.

#### - Second form: highest degree of intentionality;

**Strategic agency** involves efforts to challenge and undermine the prevalent organizing principle, or to reassert an organizing principle as adequate for the situation at hand, or even to introduce a new principle in a situation of ambiguity.

#### - Third form: lowest degree of intentionality;

**Pragmatic agency** involves the suspension of the testing and avoidance of confrontation around value schemes so that action may resume. It consists in pragmatic accommodations and relativization.

#### ATTENTION TO RELATIONALITY

The test draws attention to the relational nature of institutional work, where actions engender emergent reactions as forms of agency develop and evolve in context. It is this relational interaction that generates outcomes, not the specific behaviors of any particular agent.

#### ATTENTION TO TEMPORALITY

Tests punctuate the evolution of institutions. The test provides a strong unit of analysis for considering the interplay of "quiet periods" and moments of contestation in institutional evolution. There is value in moving the unit of analysis away from specific actors and towards the sequence of moments of test to better capture the continuing nature of institutional work.

The forms of actions described above and summarized in Table 2 resonate with actions found in the institutional work literature. However, a clear majority of studies have addressed the higher level of intentionality, while fewer have dealt with the moderate and more pragmatic forms of agency. Indeed, the most radical form of agency in which underlying principles are questioned or new principles are put forward (*strategic agency*) seems at first sight to be most naturally associated with disruptive, defensive or creative kinds of institutional work. This is the case, for example, for the environmental activists in Zietsma and Lawrence's (2010) study of the forest industry, as they questioned the principles underlying existing institutionalized logging practices. In contrast, *interpretive agency*—in which attention is drawn to problematic instantiations of extant principles—seems to be associated most obviously with institutional

#### Examples from empirical studies

- Production and maintenance of opposing legitimating accounts, all drawing on the civil rights principle, to determine the mode of application of non-discrimination workplace policies to gay, lesbian, bisexual and transgender people (Creed, et al., 2002).

- Efforts by environmentalists to change the basis for logging decisions in the forest industry (Zietsma & Lawrence, 2010). A form of agency that constitutes disruptive institutional work in this setting.

- Tolerance of rule violations within the Cambridge University Boat Race team to enable action to continue (Lok & de Rond, 2012). A combination of the third form of agency (called "containment work" by the authors) and the first form of agency (called "restoration work" and found in cases of severe deviations) promoted institutional maintenance.

- McInerney's (2008) conventionalist study of a field configuring event in the non-profit technology assistance field. The study illustrates a moment of test in which the highly deliberate efforts of one actor based on one set of principles were countered by the more opportunistic reactions of another actor that succeeded in structuring the principles in the field (an example of creative institutional work). The outcome could not be explained without understanding the nature of actions and reactions in context.

- Yamaguchi and Suda's (2010) conventionalist study of controversies about genetically modified organisms (GMOs) in Japan over 20 years. The study examines the interplay of quiet periods and moments of controversy in the evolution of social representations of GMOs.

maintenance work, potentially incorporating negotiation over accepted interpretations of existing principles and their stretching or adjustment to accommodate novel concerns. An example of this can be seen in Creed, Scully and Austin's (2002) study of the production and maintenance of legitimating accounts in relation to employment non-discrimination policies, in which neither proponents or opponents contested the overarching civil rights principle underlying these policies, but debated whether and how these policies should apply to gay, lesbian, bisexual, and transgender people.

And yet, the patterns of agency involved in institutional reproduction and evolution may not be as simple as hinted at by more recent studies. In particular, the third lesser form of agency discussed above, though less studied, may also play an important role in both institutional maintenance and change. For example, Lok and de Rond's (2012) study of the processes through which "rules of engagement" of the Cambridge University Boat Club (especially rules concerning criteria for crew selection and behavior) are maintained shows how certain overt deviations were smoothed over, or normalized and accounted for, as acceptable exceptions to institutional prescriptions so as to carry on with ongoing activities. Under a conventionalist theory reading, these instances of deviation would constitute moments of test, and the ways in which actors manage these challenges to institutional practices and principles exemplify actions we have termed as *pragmatic agency*. Interestingly, the study by Lok and de Rond (2012) also shows that as deviations persisted or became more serious, participants began to call attention to the inconsistencies, resulting in what the authors call "restoration work" and reflecting the first and stronger form of agency described above. Lok and de Rond (2012) argue that both the initial containment and the following restoration work are both important for the preservation of the institution. If no minor deviations were tolerated. the institution would appear to be too rigid to survive through application in a multitude of varied situations. However, the awareness of inconsistency that these deviations eventually create results in the regular reaffirmation and rehearsal of underlying principles that also contribute to sustaining the institution.

Pragmatic forms of agency in which principles are glossed over in order to pursue ongoing activities may not, however, always be associated with institutional maintenance. The subtle disruptive effects of such actions may accumulate over time, gradually undermining the foundations of the institution and potentially introducing principles and objects associated with alternative orders of worth. Lounsbury and Crumley's (2007) account of the emergence and legitimation of active money management in the mutual fund industry provides a telling illustration. Active money management practices were pragmatic experimentations, initially regarded as nonproblematic since observed deviations were viewed as inconsequential by industry insiders wanting "to protect the stable world they created" (ibid: 999). The new practice grew and, aided by a parallel professionalization process, eventually triggered a questioning of the principles underlying mutual fund money management, resulting in institutional change: active money management became legitimate alongside passive management practices.

Lawrence et al. (2011: 53) note that "the concept of work implies some kind of intentionality, however varied that intentionality might be", and suggest that institutional work may involve multiple forms of agency, ranging from deliberate strategic acts that aim to reshape institutional arrangements, to more practical management of the exigencies of the situation, or even more conservative selective reproduction of past patterns of action. Our discussion above shows that the notion of test offers a promising analytical apparatus that can uncover the highly intentional as well as the less intentional, and the strategic as well as more pragmatic forms of institutional work. Actions, intentional or less so, do not however occur in a vacuum, but necessarily result in chains of reaction and interaction. As we next explore, the notion of test also contributes by illuminating the relational nature of institutional work.

#### The test and relationality

We argue that by focussing on moments of test, more systematic attention can be given to the unfolding situations through which actions and reactions are played out (see Table 2). This provides a valuable opportunity for a finegrained analysis of the interplay between potentially very different forms of actions. For instance, highly intentional forms of creative work may meet with reactions that are similarly motivated, but edging towards maintenance, or they may meet with reactions that aim to smooth things over and not make a big deal out of the newly proposed practices. It is the combination of varied forms of actions, carried out by a multitude of actors in specific contexts, which imprints particular trajectories to institutional work and its outcomes.

The notion of test inherently embraces the idea that when some action is put to the test there is usually a reaction, and it is the combined effect of both that influences the ensuing action. Specifically, tests give rise to critiques and justifications which, as we have defined, consist in argumentative moves relying on material proofs that actors use in a particular situation to point out inconsistencies (critiques) and justify their actions and choices (justifications) in relation to legitimate organizing principles. Critiques and justifications unfold until the arguments and material proofs deployed are deemed conclusive and a decision is made as to how to proceed, or until testing is suspended - as for instance in the case of relativizing (Boltanski & Thévenot, 2006). Moreover, critiques and justifications evolve concomitantly: justifications are often offered in response to critiques, and new critiques may be laid based on the arguments and material proofs put forth in these justifications. As noted above, another possibility is that actors avoid letting the exchange of critique and justification unfold, so as to get back to their activity. Therefore, we argue that the examination of critiques and justifications - or more broadly speaking, threads of actions and reactions – without due attention to the link between them, may give us only a partial understanding of institutional work.

A number of studies on agency and institutions have addressed the social and political processes through which institutional creation, disruption and maintenance develop (e.g., Garud, et al., 2002; Maguire & Hardy, 2006). However, they tend to present actors' actions and others' reactions as manifestations of the substantive properties that define them, such as their institutional or professional origins. We do not dispute these conclusions, but we argue that closer attention to the interaction between actions and reactions may reveal other conditions that affect the unfolding of institutional work.

For example, Moreira (2005) draws on Boltanski and Thévenot (2006) to examine the development process for medical practice guidelines, seen as moments of test in which different repertoires of evaluation (industrial, domestic,

civic) are drawn on by the varied members of the guideline development group in their collective efforts to instantiate locally adapted versions of "evidencebased medicine". For example, participants refer to scientific data (charts and studies) that represent an industrial-world conception of medical practice, but also to patient experiences that represent a different form of "proof" associated with the domestic worth. Importantly, the author explicitly discusses how viewing members' perspectives as if substantively determined by their position in the organization of medicine would have meant "oversimplifying the diversity of ways in which group members articulate the relationship between the evidence presented and its possible 'worlds'" (Moreira, 2005: 1977). By focussing on the moments of test, and hence not assuming away or under-exploring relationality, the author shows how varying combinations of actions and reactions develop, depending on the issues discussed and repertoires of evaluation drawn upon. These actions and reactions shaped and reinforced the guideline development process and "evidence-based medicine" as an institutionalized practice.

In other words, closer attention to the moment of test would help to open the analytical lens to the multiple ways in which actions and reactions may combine in context, which may deepen our understanding of institutional work (see also Table 2). These actions and reactions may occur in particular moments of testing, but as discussed next, they may also play out over longer periods as moments of test are interspersed with quieter periods of institutional stability.

#### The test and temporality

Conventionalist theory invites us to explore the temporal flow of actions (Boltanski & Thévenot, 2006; Dodier, 1993). It places particular emphasis on the actions of embedded actors, who are involved in frequent work of interpretation, evaluation, deliberation and decision in relation to the enactment of the organizing principles guiding social action. Thus, tests punctuate the flow of actions over time, and the varied engagements of individuals and collective actors in these moments of test affect the outcome of the testing and the instantiation and evolution of the organizing principles they were concerned with.

Tests are frequent occurrences, and actors do not always "open their eyes" to point to contradictions discernible in the flow of action; they may also "close their eyes" so as to engage uncritically in what they are doing (Boltanski & Thévenot, 2006: 232). In conceiving of social coordination as instances where multiple organizing principles may coexist and where actors may open or close their eyes on inconsistencies, the authors also point to the inherent succession of quiet periods of relatively unreflexive reproduction of accepted procedures and meaning systems, and of periods of questioning when the procedures or organizing principles underpinning these have to be explicitly justified. Indeed, a quiet period is never totally protected from disruptive testing, which may tip the situation into a period of questioning or conflict. Likewise, periods of questioning are not permanent either. Actors will seek to reduce uncertainty by trying to reach more or less lasting agreements or relativizing the tension. Thus, quiet periods and periods of questioning jointly shape the evolution of organizing principles, and the varied engagement of actors in tests leads the transition from one period to another.

We argue that tests are endemic to institutional life. Indeed, over the life course of an institution, actors' actions and reactions in moments of test affect

institutional emergence, diffusion, persistence, disruption, disappearance, and even the possible merging of institutional forms. Institutions are subjected to tests in practical situations, and the succession of these moments—where actors may voice concerns or engage uncritically in the test—may hence give a particular course to the evolution of an institution. Thus, it is our contention that by focussing on the moments of test in institutional work research, we may better examine institutional stability and change, and also those points when institutional stability may be on the verge of sliding into institutional change (or vice-versa). Studying tests may prove productive for ongoing research efforts on the unfolding and interweaving of stages of institutional evolution and how human action contributes to particular paths of evolution.

Yamaguchi and Suda's (2010) study of controversies over genetically modified organisms (GMOs) in Japan over a period of 20 years provides an example of research that has examined the interweaving of quiet and questioning periods in the evolution of an institution. The authors draw on conventionalist theory to investigate the controversies that erupted over time and the varied forms of actions, arguments and material proofs that various actors drew on to denounce or justify GMOs. A period of relative calm followed the introduction of GMOs whose acceptability then primarily rested on their superior productivity (industrial worth), but hot debates arose as the introduction of GMO food labeling was considered nationally. These moments of test saw the confrontation of argumentative moves for and against the labeling (reflecting civic and market worths) which finally resulted in the adoption of GMO labeling. A seemingly quiet period ensued but was interspersed with periods of tension when a growing number of tests erupted over the safety of GMO open-field trials. The longitudinal analysis performed by the authors provides a valuable opportunity to see how the sequence of periods of apparent quiet and periods of tension contributed-together with external events-to shaping the evolution of GMOs' acceptability in Japan and the rationalities underpinning its subsistence.

Focussing on the moments of test in relation to institutional evolution may also provide an opportunity to further research the conditions prompting or enabling transition from stability to change. Here, comparative studies of the particular arrangements characterizing these moments and the proofs and arguments that actors bring to bear may help shed light on the relative importance of factors.

In sum, we suggest that there is benefit in shifting somewhat the central unit of analysis in the study of institutional work from the actors involved and their selfinterested strategies in singular stages of institutional evolution, to the moments of test which punctuate institutional life. These are moments of confrontation when the principles governing actions in a field and the procedures that support them are brought to the fore, questioned, left to rest or sorted out, and potentially reconfigured in interaction. The actions and reactions of actors as the test unfolds may orient institutional work and the evolution of institutions. We do not argue that a focus on specific actors is not valuable, but rather suggest that a focus on the moments of test and what actors do in those moments may add depth to our understanding of institutional work.

Based on these ideas, we now examine how a focus on the notion of test might offer distinctive insights into the creation, maintenance and disruption of institutions as well as their ongoing evolution. In particular, we use a number of examples from the conventionalist literature to illustrate its potential and to draw out the contribution that it can make to research on institutional work in terms of an expanded attention to varied forms of agency, relationality and temporality.

## APPLICATION: MOMENTS OF TEST IN THE EVOLUTION OF INSTITUTIONS

### The test and institutional creation

We suggest that an analytical focus on the moments of test would help to better analyze instances of creative institutional work which may include decisive promotions of new regulative, normative or cognitive institutional foundations, but also pragmatic arrangements leading to institutional creation without such deliberate efforts, or even without immediate contestation of extant institutional principles. Notably, focussing on the moments of test allows us to adopt a broader view of the forms of agency and relationality involved in creative institutional work.

One interesting illustration can be found in McInerney's (2008) analysis of a field-configuring event that led to the emergence of new rules for the non-profit technology assistance field. McInerney (2008: 1093) defines field-configuring events as "occasions for institutional entrepreneurs to make claims and test the claims of others". The event presented by McInerney was the site of confrontation of divergent expectations on the nature of the meeting and, more profoundly, a clash between different value frameworks associated with the emerging non-profit technology assistance field.

By focussing on the moment of test, the author was able not only to examine the highly deliberate strategic action of the instigator of the field creation idea (promoting civic / inspirational principles), but also to capture the more emergent seizing of opportunity of another field player as the tension born from the confrontation of competing organizing principles mounted. This field player took the opportunity to propose an alternative account (relying on market / industrial principles) which other participants in the event from the business world were more sensitive to, and which ultimately became the field convention and the bedrock for broader institutionalization. The study shows, in particular, how forms of agency may emerge relationally in interaction and have important consequences. Had the study focussed primarily on the outcome (the creation of the shared conventionalized account) instead of the process (the event and unfolding development), it might have granted the second player a more heroic role than was apparent in practice. The situated actions and interactions among different participants were critical to producing this particular outcome at this particular moment.

#### The test and the maintenance of institutions

In relation to institutional maintenance work, agency and relationality are also important dimensions that can be illuminated by a focus on the notion of test. In particular, we highlight here the important role that tests may play in sustaining institutions, since tests may be institutionalized and hence constitute a significant legitimate *processual* form of instantiation of a given organizing principle. The study of actors' engagement with these tests may contribute greatly to our understanding of maintenance work, including instances where accommodations are made and through which institutions reveal their plasticity (see for example Lok & de Rond, 2012). Examples of institutionalized tests, which Boltanski and Thévenot (2006: 143-144) label as "model tests", consist of structured and consistent procedures such as courts of law (a model test associated with the civic order of worth), or a standard performance appraisal procedure associated with the industrial order of worth. The nature of model tests, and the work done by participating actors as they interact to conserve their legitimacy, is a particularly interesting focus for research on institutional work.

For example, Reinecke (2010) shows how the institution of "fair trade" in the coffee market is sustained by a complex but institutionalized testing framework in which the minimum price of coffee is established by combining technical cost calculations based on data from producers (compatible with the industrial order of worth) with mechanisms of democratic consensus among representatives of labeling organizations, producers and traders (compatible with the civic order). This "model test" engages participating individuals in continually constructing the meaning of "fair trade" in interaction. The interpretative agency that actors deploy as they call on and apply its principles in particular historical contexts helps to maintain the institution. As Lamont (2009) notes in her study of another testing framework (academic peer review) participants in such processes cannot leave their personal tastes behind, yet they believe in the processes they participate in as ultimately necessary to ensure the legitimacy of the system that supports their activity, and tend to work to sustain that belief. Such examples show that model test situations are never perfectly predictable. Thus, every situated "performance" of a model test carries within it the possibility of deviance or adaptation-and hence agency-recalling Feldman and Pentland's (2003) notions of performative and ostensive routines.

#### The test and the disruption of institutions

Moments of test may also contribute quite directly to disrupting institutions when critiques and justifications are brought forward concerning the principles that ought to guide social coordination in the form of second order tests, or when they concern a challenge to the legitimating procedures associated with an existing or nascent organizing principle. These moments also constitute a particularly interesting focus for research on the relation between varying forms of agency and the unsettling, displacement or disappearance of institutions.

For example, drawing on conventionalist theory, Mesny and Mailhot (2005) describe a situation in which "work" being accomplished by actors leaves a nascent institution in a continuing unsettled state. The case related shows how a formalized university-industry partnership was repeatedly disrupted. Although the partnership had been in existence for over two years, its actual implementation was continuously stalled, as every time a project was discussed, actors relentlessly questioned and debated the principles which should guide the selection and management of projects. A focus on these recurrent moments of test reveals how actors' actions and reactions jointly contributed to engendering lasting periods of insider-driven institutional conflict. The analysis further unveils the particular forms of strategic agency that played out during the process.

Another example of disruptive work is perceptible in the case of legitimacy repair work described by Patriotta et al. (2011). Following the publicizing of

a nuclear accident it had sought to quieten and ensuing questioning of the legitimacy of this form of energy, a European nuclear power plant (Vattenfall) actively sought to regain its legitimacy. The case described highlights moments of test during which field players and owners of Vattenfall iteratively drew on a number of organizing principles to respectively debase or legitimate nuclear energy production. As the authors note, the actions and reactions of protagonists in these sets of disruptive and maintenance work contributed to the construction and reconstruction of the place and meaning of nuclear power in Germany.

#### The test and the evolution of institutions

The above studies, which use Boltanski and Thévenot's (2006) theoretical framework, show that the notion of test can be mobilized equally to investigate institutional work involved in the creation, maintenance and disruption of institutions. Thus, it is not a concept restricted to a single moment of development. Moreover, as the studies described above show, a focus on specific moments of test can throw light both on the varied and sometimes subtle forms of agency that are brought to bear in these occasions, and on the pattern of action and reaction composing institutional work and leading to different outcomes.

As we indicated above, the notion of test can also be valuably considered as part of a longer-term pattern of institutional evolution. For example, Kaplan and Murray (2010) investigate the creation of the institutional setup that would govern the biotechnology field, drawing on conventionalist theory and the notion of test in particular. They highlight the contests through which field players sought, and even fought, over a period of 30 years, to shape the specific codified procedures—which the authors conceive as "tests of value" which were to bear on the patenting of biotechnology-produced organisms, and hence ultimately influence the defining logic underpinning biotechnology. As the authors suggest, studying the evolution of the institutional arrangements grounding the biotechnological field through an examination of moments of test revealed a non-linear evolutionary process consisting of periods of change, stability, and redirection of the evolutionary thread.

Historical analyses, similar to those of Kaplan and Murray (2008) and Yamaguchi and Suda (2010), have also been conducted drawing on an institutional lens. For instance, Farjoun's (2002) study of connect-time as a pricing standard in the online database industry covers the evolution of this standard over an extended period. This research highlights the crucial role of contestations in institutional development, and suggests that such contests are permanent features of institutional life. However, we wonder if there might have been periods when institutional stability resulted not from forces of inertia outweighing forces of change, but rather from the fact that various actors accepted and took for granted the institutional setup or, in other words, that actors engaged uncritically in activities. A closer look at moments of test (rather than just moments of contestation) might have pointed to such instances in the evolution of the connect-time pricing standard. In addition, we suggest that using the moments of test as a unit of analysis might have allowed a deeper examination of the substance of contestations, and the principles and values they were related to. This might have shown how the nature of the contestation influenced the transition from one stage to another, and the sequence of institutional stability and change.

In summary, a focus on moments of test is useful not only for tracing the evolution of institutional arrangements, but also to gain a better understanding of shifts in procedures or prevalent organizing principles, and how and why particular patterns do or do not develop. We argue that institutional work research would benefit from more systematic attention to the sequences of institutional stability and change and how they follow one another, through a mobilization of the notion of test.

### CONCLUSION

The notion of test reminds us that human agency is shaped by legitimate organizing principles, yet in the unfolding of moments of test, the actions of actors may also contribute to the shaping of institutional arrangements and their underpinning principles. In this paper, we argue that the notion of test as developed by conventionalist theory can add a valuable analytical framework to the institutional theoretical apparatus. It invites us to take seriously actors' reproduction, translation, re-interpretation, and re-definition of the principles that guide their actions, and the social interactions through which such production occurs. Moments of test constitute valuable loci that allow us to apprehend and investigate the organizing principles at play in a social sphere, their dynamic coming together and confrontation, the how and why of particular types of institutional work and the effects of this recursive interaction between human agents and the legitimating systems that shape their actions.

In this paper, we identified key issues in the institutional work literature which we believe would benefit from an analytical focus on the moments of test. First, we proposed that the test offers a way of capturing the varied forms of agency underlying institutional work. Conventionalist theory presupposes that all actors have potential for reflexivity in particular situations, but that this may take a variety of forms, ranging from a tolerant acceptance of institutional accommodations to more deliberate attempts to influence or question the principles underlying action. Second, we have shown that the notion of test favors a conception of institutional work as relational and distributed, i.e., as involving actions and reactions of people and material objects in situation and over time. This shifts the focus from the initiatives of particular individuals towards their dynamic interactions during and surrounding critical moments. Third, we proposed that the notion of test offers an analytical lens for institutional work that emphasizes temporality - i.e., a focus on critical moments of institutional guestioning and their interweaving with moments of "quiet", in which novel practices may develop and grow through more pragmatic arrangements, distant from critical scrutiny. We illustrated these ideas by drawing on recent examples from the conventionalist and institutional work literatures.

In conclusion, the notion of test from conventionalist theory provides a fascinating unit of analysis that allows us to observe institutional work in situ and examine how legitimate organizing principles are instantiated through the actions of actors and the tests they deploy. Tests punctuate the evolution of institutions in important ways: they are moments of questioning in which the organizing principles guiding the actions of individuals and collective actors are made particularly visible, and when the actions and reactions of actors engaged

in the situations are opened up for deeper examination (Boltanski & Thévenot, 2006). Bridging the institutional work and conventionalist perspectives, research mobilizing the notion of test can provide useful insights into how actors, by addressing the constraints faced in particular situations, may iteratively affect and reconstruct the principles and value frameworks of tomorrow.

**Kafui Dansou** is a PhD candidate at HEC Montréal, Canada. Her research interests include the study of the complex relations between institutions and organizational and social dynamics. She is currently conducting research on strategy formation in pluralistic settings, and more specifically nonprofit development organizations.

**Ann Langley** is professor of management at HEC Montréal and Canada research chair in strategic management in pluralistic settings. Her research focuses on strategic change, leadership, innovation and the use of management tools in complex organizations with an emphasis on processual and qualitative research approaches.

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